

Claims

1. A vaccine composition comprising a virus or a cell and further comprising a fusion polypeptide, said fusion polypeptide comprising
a first amino acid sequence which comprises a cell – surface binding moiety
and
a second amino acid sequence comprising a ligand for a cell surface polypeptide of a leukocyte,
wherein said vaccine composition comprises said fusion polypeptide bound to said virus or said cell and further comprises some of said polypeptide which is not bound to said virus or said cell.
2. The vaccine composition of claim 1, wherein said ligand of said second amino acid sequence is chosen from the group: a ligand for a cytokine receptor, a ligand for CD40, a ligand for an adhesion molecule, a ligand for a defensin receptor, a ligand for a heat shock protein receptor, a ligand for a T cell costimulatory molecule, a ligand for a counterreceptor for a T cell costimulatory molecule, a ligand for an opsonin receptor.
3. The vaccine composition of claim 2 wherein said ligand comprises at least about five contiguous amino acids of a naturally occurring cytokine, said cytokine being chosen from the group: GM-CSF, an interleukin, a chemokine, an interferon, a TNF-alpha, a flt-3 ligand.
4. The vaccine composition of claim 2 wherein said ligand comprises at least about five contiguous amino acids of a naturally occurring CD154 molecule.

5. The vaccine composition of claim 1, wherein said comprised cell is chosen from the group: a tumor cell, a bacterial cell, a fungal cell, a cell of a parasite, a mammalian cell, an insect cell.
6. The vaccine composition of claim 5, wherein said cell is pathogenic.
7. The vaccine composition of claim 5, wherein said cell is attenuated.
8. The vaccine composition of claim 1, wherein said cell is substantially unable to divide.
9. The vaccine composition of claim 1, wherein said leukocyte is an antigen presenting cell.
10. The vaccine composition of claim 9, wherein said leukocyte is a professional antigen presenting cell.
11. The vaccine composition of claim 9, wherein said leukocyte is a dendritic cell.